Amendments to the Claims:

Please cancel claims 1-7, 11, 15, 16 and 21-26.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-7. (cancelled)

8. (previously presented) A voice coil actuator comprising

a core having an axis;

a permanent magnet having a longitudinal axis, and positioned so that the longitudinal axis of the permanent magnet is substantially parallel to the axis of the core;

a moving coil positioned to interact with the permanent magnet along the axis of the core; and

a compensating coil positioned to interact with the moving coil, wherein a magneto-motive force in the compensating coil is controlled as a function of a position of the moving coil;

wherein the compensating coil is positioned about the core;

wherein the compensating coil extends along substantially the entire length of the core; and

wherein the permanent magnet is positioned with respect to the core to define a cavity between the core and an end of the permanent magnet; and further wherein a second compensating coil is positioned in the cavity.

9. (original) The actuator of claim 8, wherein a second cavity is defined at another end of the permanent magnet between the permanent magnet and the core, and further wherein a further compensating coil is positioned in the second cavity.

10. (previously presented) A voice coil actuator comprising

a core having an axis;

a permanent magnet having a longitudinal axis, and positioned so that the longitudinal axis of the permanent magnet is substantially parallel to the axis of the core;

a moving coil positioned to interact with the permanent magnet along the axis of the core; and

a compensating coil positioned to interact with the moving coil, wherein a magneto-motive force in the compensating coil is controlled as a function of a position of the moving coil;

wherein the permanent magnet is positioned with respect to the core to define a cavity between the core and an end of the permanent magnet; and further wherein the compensating coil is positioned in the cavity;

wherein a second cavity is defined at another end of the permanent magnet between the permanent magnet and the core, and further wherein a further compensating coil is positioned in the second cavity;

further including a core compensating coil positioned about the core.

11. (cancelled)

12. (original) An actuator comprising:

a core;

a permanent magnet having a longitudinal axis, and positioned so that the longitudinal axis of the permanent magnet is substantially parallel to an axis of the core;

a moving coil positioned to interact with the permanent magnet along the axis of the core; and

a plurality of compensating coils positioned to interact with the moving coil and controlled as a function of a position of the moving coil, including

a core compensating coil positioned about the core;

a first compensating coil positioned in a cavity formed between an end of the permanent magnet and the core.

13. (original) The actuator of claim 12, further including a second compensating coil positioned in a second cavity formed between an other end of the permanent magnet and the core.

14. (original) The actuator of claim 13, further including

a position sensor responsive to the position of the moving coil; and

a plurality of power supplies, each responsive to the position sensor, and coupled to provide power to a corresponding one of the core compensating coil, the first compensating coil, and the second compensating coil, as a function of the stroke of the moving coil.

15-16. (cancelled)

17. (original) The actuator of claim 10, wherein the actuator is closed-ended.

18. (original) The actuator of claim 10, wherein the actuator is open-ended.

19. (original) The actuator of claim 14, wherein the actuator is closed-ended.

20. (original) The actuator of claim 14, wherein the actuator is open-ended.

21-26. (cancelled)

27. (previously presented) An actuator comprising

a core;

a permanent magnet having a longitudinal axis, and positioned so that the longitudinal axis of the permanent magnet is substantially parallel to an axis of the core;

a moving coil positioned to interact with the permanent magnet along the axis of the core; and

a compensating coil positioned to interact with the moving coil and having a magneto-motive force which is controlled as a function of a position of the moving coil;

wherein the compensating coil is positioned about the core;

wherein the compensating coil extends along substantially the entire length of the core; and

wherein the permanent magnet is positioned with respect to the core to define a cavity between the core and an end of the permanent magnet; and further wherein a second compensating coil is positioned in the cavity.

28. (previously presented) The actuator of claim 27, wherein a second cavity is defined at another end of the permanent magnet between the permanent magnet and the core, and further wherein a further compensating coil is positioned in the second cavity.

29. (previously presented) An actuator comprising

a core;

a permanent magnet having a longitudinal axis, and positioned so that the longitudinal axis of the permanent magnet is substantially parallel to an axis of the core;

a moving coil positioned to interact with the permanent magnet along the axis of the core; and

a compensating coil positioned to interact with the moving coil and having a magneto-motive force which is controlled as a function of a position of the moving coil;

wherein the permanent magnet is positioned with respect to the core to define a cavity between the core and an end of the permanent magnet; and further wherein the compensating coil is positioned in the cavity;

wherein a second cavity is defined at another end of the permanent magnet between the permanent magnet and the core, and further wherein a further compensating coil is positioned in the second cavity;

further including a core compensating coil positioned about the core.

30. (previously presented) The actuator of claim 29, wherein the actuator is closed-ended.

31. (previously presented) The actuator of claim 29, wherein the actuator is open-ended.